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31 May 1956

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EAST GERMANY/VP-SKE Mine Countermeasures Gear

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Development and construction of minesweeping gear comparable to present US equipment is underway for the VP-SKE. The magnetic tail sweep for VP-SKE will set up two fields instead of one.

1. General.

the term "Sperrwaffe" frequently applied when official mentioning was made of mine warfare. (This is the same term used in the former German Navy). VP-SKE experience with below described minesweeping gear.

During a naval weapons exhibition at PAROM naval barracks in late 1955, VP-SKE displayed only below described gear which was inspected by Russian and Polish naval specialists.

2. Mines.

no mine production of any kind was underway or planned in the near future in any SOV2000 plant. Mines available so far had been delivered by the Russians, they were of Russian design. Mine depot depots were

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known [ ] to exist; however their location and types of mines was not known.

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3. Mine laying.

HABICHT, SCHWALBE, and KRAKE-classes (see ref. (a)) were to be equipped with mine tracks on top deck. [ ] Tracks [ ] a-  
board HABICHT-class were flush with the wooden deck and could not be removed. The craft had one pair of tracks at either side. They were about 14 meters long and 40 centimeters wide. [ ]

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4. Moored-contact-mine sweeps.

VP-SSE operated 2 types of moored mine sweep gear. The designations were "Gerat mit Sprenggreifer" and "Mechanisches Schneidgerat".

a. "Gerat mit Sprenggreifer".

This was a single-ship sweep mainly consisting of several wire cables shackled together with several cutters shackled between the individual cables. The sweep was kept afloat at certain predetermined depths by conventional floats and "otters". These items were made by VEB LATENSCHEW at UCKENPUSSEN after designs the origin of which remained unknown.

[ ] All HABICHT, SCHWALBE, and KRAKE-class units were to be equipped with this gear. [ ] at least some of the craft had floats and "otters" aboard already. In Cables, cutters, and other accessories were kept in VP-SSE shore installations.

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25X1b. "Mechanisches Schneidgerat". (Mechanical Cutting Gear)

Systematic manufacture of sweeps of this conventional moored mine sweep gear began in the fall of 1955 after several models had been built on the basis of rough sketches submitted by VP-SSE personnel with minesweeping experience. Preliminary minesweeping operations with this sweep had begun in 1952. This sweep was planned to be put aboard all HABICHT, SCHWALBE, and KRAKE-class units. However, VP-SSE had found SCHWALBE-class to be too slow (maximum speed 11 knots) for the sweep which at the towing speed of between 5 and 6 knots achieved by the craft did not cut mine cables. This fact had also caused the break in SCHWALBE-class construction program.

5. Magnetic-mine sweeps.

VP-SSE operated 2 such sweeps which were officially named "Hohlstab" and "Long line Gerat".

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a. Towed-coil magnetic sweep.

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This sweep was still referred to by the old German Navy term "Hohlstab". [ ]

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At the end of 1954, VEB PIREX Shipyard at WOLGAST was ordered to build seven 12-meter sweeps: 3 in 1955 and 4 in 1956. [redacted] these were the only ones planned to be built, and that construction will be abandoned in favor of below "Long line" sweep. Electric current will be furnished by two 80-kw generators driven by 100-HP or 120-HP HUCKENWOLF diesels. The diesels will be built by DIESELMOTORENWERK ROSTOCK (DMW) at ROSTOCK. HABICHT and KRAKE-class had been selected for towing towed-coil magnetic sweeps.

b. "Long line" sweep.

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[redacted] "Long line" [redacted] consisted of 2 very long electrical cables with several electrodes. Cable length could not be estimated [redacted] their diameter was between 30 and 40 millimeters. Each cable consisted of 19 individual strands. At an unknown distance from the stern of the towing craft, two sets of 3 electrodes each were spliced at about a 30-degree angle into either cable. Length of each individual electrode was about 50 centimeters; space between 2 neighboring electrodes was about 20 centimeters. Distance between the 2 sets of 3 electrodes in either cable was unknown. The 2 cables were to be paid out equidistant behind the towing craft's stern. Purpose of the 2 sets of electrodes in either cable was to have 2 magnetic fields (1 field between the 3 electrodes of the starboard and the 3 of the port cable closer to, and the 2nd field between the 3 electrodes of the starboard and the 3 of the port cable further from the craft's stern). The sweep was designed and developed in 1955. (A similar former German Navy sweep, the KFRG - Kabelformungsmagnet, in use from about 1942 was similar, but did not have the 2 times 3 electrodes spliced into either cable, but only 1 between 1.5 and 2-meter long electrode at the very end of either cable; hence, just 1 and not 2 magnetic fields. Also similar to standard U.S. gear) For this sweep no suitable generator had been found in the SOVZONE. Most likely, electric current will be supplied by a 400-kw power generator driven by a KVD-21 type diesel engine, (an 8-cylinder V-type diesel of 540 built at VEB IPA Werke at BERLIN-NEUKÖHNEN JOHANNISSTHAL). First diesels of this series had been scheduled for 1955 delivery, but they never arrived. The sweep was designed for HABICHT and KRAKE classes.

6. Acoustic-mine sweep.

Designing an acoustic-mine sweep began at VEB PIREX Shipyard designing office in August 1955. The first sweep was scheduled to be ready for testing in the fall of 1956. Vibration of the new design was to be altered to 15 to 20 "hertz". [redacted]

The research project was among those ordered and paid for by VP-SHE. It cost 100,000 had been approved for 1956-work on the project.

7. Degaussing loops aboard VP-SHE craft.

According to captain (Kapitän zur See) WACHSMANN, chief of VP-SHE shipbuilding department, installation of degaussing loops in all VP-SHE craft was "desired", which, in

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VP-SEE terminology, meant that it was demanded by the Russians. Captain WACHSMANN added that it was also "desired" to have automatic inner latitude adjusting gear ("Breitengradregelung") for degaussing loops installed.

8. "Elektrische Kompensationsanlage".

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Official abbreviation for this set's name was "E.K. Anlage". The set was to be installed in any compass column under the magnetic compass of VP-SEE craft. Its main purpose was to compensate for additional magnetism originating from installation and operation of degaussing loops aboard ship. Tests to check the efficiency of "E.K. Anlage" against 2 components of above magnetism had been conducted [redacted]

[redacted] Tests to check the gear's efficiency against the 3rd component were to be conducted in 1956. The gear had been designed and developed and was being built by VEB GERÄTE & MASCHINEN, formerly ARKONIA Works, at Teltow. The research project was among those ordered and paid for by ZENTRALAMT FÜR FORSCHUNG & ENTWICKLUNG BEI DER STAATLICHEN PLANKOMMISSION on behalf of VP-DEER. RM DM East 25,000 had been approved for 1956-work on the project.

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9. Sinkable buoy ("Versenkbare Boje").

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A research project "Versenkbare Boje" was on the 1956 VP-SEE-research-project-list and was directed by SEENYDROGRAPHISCHER DIENST (S.H.D.). [redacted] buoy was planned to be used as a sinkable channel marker. [redacted] it was to become a "Impulsboje". [redacted] the official version regarding the buoy's planned purpose read "planned for marking channels through minefields". Designing and developing the buoy was underway at W.T.B.G. in BERLIN since 1954 during which year DM East 35,100 had been spent. In 1955, another DM East 22,000 were spent; and for 1956-work on the project, another DM East 70,000 were approved. Throughout 1955, the department PRÄZISIONSTECHNIK & OPTIK of MINISTÉRIUM DES INNEN (M.D.I.) had been concerned with the project.

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